## Apple IIc Plus





### Overview

The Apple\* He Plus personal computer gives you all the most important benefits of the Apple II family—versatility, expandability, ease of use, and software compatibility—in one compact, lightweight, elegantly designed package. In addition, it has over five times the disk storage capacity of previous Apple He models, and up to four times the processing speed.

The Apple IIc Plus offers highquality color graphics, built-in connectors for easy accessory expansion, a full-size keyboard, and a 3.5-inch high-capacity (800 kilobytes) disk drive. A completely self-contained power supply makes the computer highly transportable, and the handle locks downward to provide a stable, inclined keyboard for typing convenience. Naturally, the He Plus also offers the ease of use that has characterized the Apple II family since its inception.

If you're a first-time computer buyer who wants a system that will just "plug in and go," the Apple He Plus is a smart choice.

### Features

# Benefits

<ul> <li>Computer, keybrard, disk drive, and power supply in one unit</li> </ul>	<ul> <li>Eliminates complicated setup—just attach a monitor and a power cord, and the Apple IIc Plus is ready to go.</li> </ul>
➤ Selectable i megahertz or I megahertz clock speed	<ul> <li>Allows productivity programs to calculate your data up to four times faster than on previous Apple He models.</li> </ul>
➤ 128 kilobytes of user memory (RAM), expandable to more than 1 megabyte	<ul> <li>Lets you increase the memory as needed for faster access to large docu- ments and powerful applications.</li> </ul>
► 800-kilobyte disk drive (uses 3.5-inch disks)	<ul> <li>Provides faster, quieter disk access and over five times the storage capacity of previous Apple IIc models.</li> </ul>
► Disk drive connector	Allows you to "daisy-chain" as many as three external 3.5-inch and/or 5.25-inch disk drives," for easy access to thousands of applications for the Apple II family.
➤ Additional built in peripherals ports	<ul> <li>Lets your-asily customize your system with a mouse, printer, modern, joystick, or other accessories.</li> <li>Provides a flexible growth path for future expansion—without requiring interface cards.</li> </ul>
➤ Built-in color graphics	<ul> <li>Lets you design graphics in up to 16 colors for home, school, and business applications.</li> </ul>
Complete set of interactive totorials on one 3.5-inch disk	<ul> <li>Gets you up and minning quickly, even if you've never used a computer before.</li> </ul>
► Built in Applesoft BASIC programming language, plus an on-disk tutorial	<ul> <li>Makes it easy and fun to program your computer.</li> </ul>

\* See the Apple Be Plus Orivier's Genile for allowable configurations.

#### Technical Specifications

### Central processing unit (CPU)

- ► Microprocessor 65C02
- Clock speed: I to 4 megahertz (user selectable)
- Address bus: 16 bits.
- Address range: 65,536 bytes (64K)
- ► Data bas: 8 bits
- Registers (8-bit): accumulator, two index registers, stack pointer, and processor status register

#### Memory

- 128K of RAM (random-access memory), optionally expandable to 1.15 megabytes
- 32K of ROM (read-only memory), containing:
- -System monitor
- -Applesoft BASIC interpreter
- —80-column display firmware

#### Text display modes

- ▶ 80-column text (80 columns by 24 lines)
- 40-column text (40 columns by 24 lines)
- All text can appear on the screen as normal, inverse, flashing, or MouseText characters

#### Graphics display modes

- ➤ Double high-resolution (560 dots horizontally by 192 dots vertically; 16 colors)
- High-resolution (280 dots horizontally by 192 dots vertically; 6 colors)
- Low-resolution (40 dots horizontally by 48 dots vertically; 16 colors)
- All graphics modes can be configured to allow four lines of text at the bottom of the screen

#### Keyboard

- 63-key full-size keyboard
- ► Full 128-character ASCII, Including 96 uppercase and lowercase alphanumeric characters, and 32 control characters
- Special-purpose keys; Shift, Caps Lock, Control, Escape, Return, Tab, Delete, up arrow, down arrow, left arrow, right arrow, Reset, Open Apple
- Keyboard is switchable between Sholes (QWERTY) and Dyorak Enyouts
- Includes speaker-volume slide control

#### Disk drive

- Disk size: 3.5 inches
- Capacity: 800 kilohytes
- ► Recogling surfaces: 2
- ► Tracks per surface: 80
- ▶ Blocks per disk: 1,600
- Push button for motorized eject

#### Interfaces

- External disk drive port, using 19-pin D-style connector, allows daisy-chain connection of up to three additional drives (Apple 3.5 Drive, UniDisk\* 3.5, and/or Apple 5.25 Drive)
- Two RS-232 serial ports with 8-pin minicircular connectors (for printer, modern, and other accessories)
- NTSC (composite) color video, via RCA phono jack
- 15-pin D-style connector for video expansion
- 9-pin D-style connector for mouse, joystick, hand controllers, or other accessories
- ▶ Internal 34-pin connector for memory expansion up to 1.15 megaliytes
- Standard 3-pin grounded power plug

#### Electrical requirements

- ► Line voltage: 90 to 130 volts AC
- ▶ Line frequency: 50 to 60 hertz
- Maximum power consumption; 20 watts continuous
- Supply voltages:
- +5 volts (±5%)
- +12 volts (±10%)
- -12 volts (±10%)
- Maximum supply currents:
- +5 volts 1.5 cmps
- +12 volts = 0.9 amps continuous
  - 1.5 amps Intermittent
- 12 volts 100 milliamps

### Environmental requirements

- Operating temperature: 50° to 104° F (10° to 40° C).
- Relative humidity: 20% to 95%

#### Safety and EMI qualifications

- FCC Part 15 Glass B Computing Devices
- ► UL 114—Office Appliances and Business Equipment

#### Size and weight

- Height: 2.5 in. (6.35 cm)
- Width: 12 in. (30.48 cm).
- Depth; 11.5 in. (29.2 cm).
- Weight: 7 lb. (3.2 kg).



# Apple IIc Plus

#### Ordering Information

Apple He Plus Order No. A254500 With your order, you'll receive:

- Apple He Plus personal. computer with built-in 800K disk drive
- Apple II System Disk
- ► Tutorial disk
- Owner's guide
- Apple II System Disk User's Cambe
- A Touch of Applesoft BASIC Maintail
- Power cond
- Limited warranty statement

